



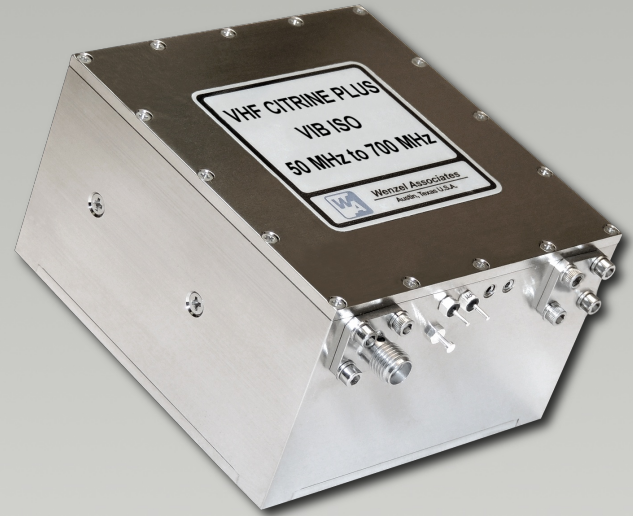
Low Noise Crystal Oscillators > Vibration Isolated VHF Citrine Plus

Features:

- Frequencies from 50 MHz to 700 MHz, fixed
- Standard or Premium Phase Noise Options
- Ruggedized for Dynamic Environments
- Low G-Sensitivity to 2E-10/g per axis
- Natural Mount Frequency: ~35 Hz, typical
- Effective G-Sensitivity to 5E-12/g (2 kHz offset)

Applications:

- Military Applications
- Airborne and Ground
- Radar Systems
- Tactical Radio
- Vehicular Communication



Electrical Specifications	
Output Frequency (fixed; specify within range)	50 MHz to 700 MHz
Output Level	+13 dBm ±2 dB into 50 ohms
Aging	
Per day after 30 days operating, typical	5 x 10 ⁻⁹
Second year, typical	5 x 10 ⁻⁷
Per year thereafter, typical	3 x 10 ⁻⁷
Temperature Stability (consult factory for other ranges)	
Range E: 0 to +50°C (Ref: +25°C)	≤ ±2 x 10 ⁻⁷
Range F: -20 to +70°C (Ref: +25°C)	≤ ±5 x 10 ⁻⁷
Range G: -55 to +85°C (Ref: +25°C)	≤ ±2 x 10 ⁻⁶
Phase Noise	(Frequency Dependent: See Standard Specifications and Part Numbers table below for details)
Harmonics	≤ -30 dBc
Sub-Harmonics	≤ -50 dBc
Spurious	≤ -80 dBc
Tuning	(MT and ET ranges can be reversed upon request)
- Mechanical Tuning	≥ ±4 x 10 ⁻⁶ , typical
- Electrical Tuning	
Tuning A: 0 to +10 VDC	≥ ±5 x 10 ⁻⁷ , typical
Tuning B: ±5 VDC	≥ ±5 x 10 ⁻⁷ , typical
Slope: Negative	(Positive Slope available on some ET only models)
Supply Voltage	+15 VDC or +12 VDC (±5%)
Warm-up	≤ 9 Watts for 5 minutes at +25°C
Total	≤ 6 Watts at +25°C
Crystal Type	SC-cut
Crystal Acceleration Sensitivity	5 x 10 ⁻¹⁰ /g, typical; to 2 x 10 ⁻¹⁰ /g, available
Natural Mount Resonant Frequency	~35 Hz, typical
Mechanical	
Packaging	Nickel-Plated Machined Aluminum
Dimensions	3.0" x 2.8" x 1.75"
Connectors / Mounting	SMA(f) and solder pins on side Threaded Inserts, #2-56, 4 places

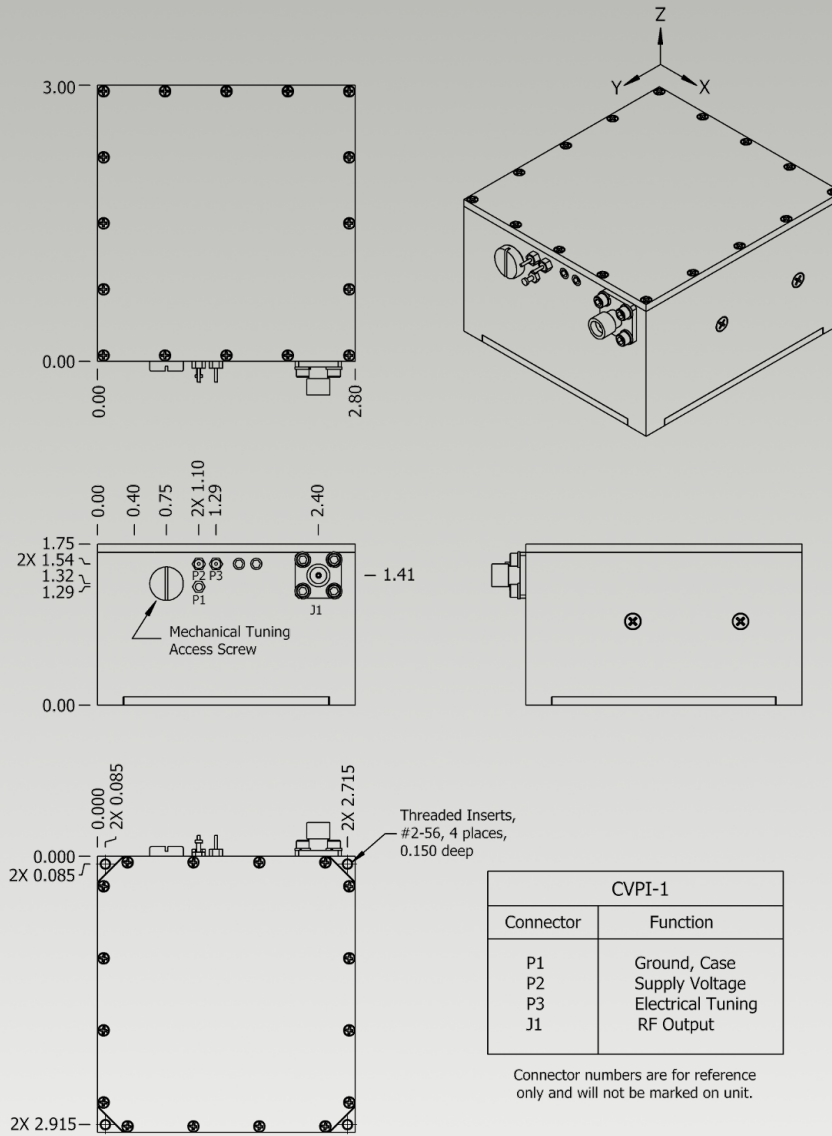
Description:

The Vibration Isolated VHF Citrine Plus is a 25 MHz to 160 MHz fixed frequency rugged OCXO coupled with an additional circuit such as a multiplier, divider, amplifier or filter, when the application demands something extra, and mounted within an outer enclosure using shock mounts. This integrated assembly can provide a fixed output frequency between 50 MHz and 700 MHz and offers good temperature stability, Standard or Premium phase noise and low g-sensitivity (to 2E-10/g per axis). Although vibration isolation may not be a viable solution for some applications, it works well for dampening vibration beyond the natural resonant frequency of the isolated unit, typically 30 Hz to 50 Hz, and varies depending on the weight of the isolated unit and vibration profile. This unit is an ideal solution for airborne and mobile applications with random vibration requiring improved dynamic phase noise performance at offsets at and beyond 80 Hz. Effective g-sensitivity to 5E-12/g (2 kHz offset) can be realized. The nickel-plated machined aluminum outer enclosure is 3" x 2.8" x 1.75". An internal voltage regulator is provided for excellent power supply line rejection. Please consult the factory if you need any specifications to be modified to better suit your application.





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Standard Specifications and Part Numbers **

Part Number	Output Frequency * (MHz)	Typical Phase Noise (dBc/Hz), Static *					Output Level (dBm) * into 50 ohms	Temperature Stability (Ref: +25°C) *	Supply Voltage (VDC)	Acceleration Sensitivity (/g per axis)*	Package / Connectors	Package Size (inches)
		10 Hz	100 Hz	1 kHz	10 kHz	100 kHz						
501-25999	500	-85	-115	-142	-159	-160	+13 ±2	±5E-7, 0 to +50°C	+15	5E-10, typ	SMA(f) & Pins on Side	2.8 x 3 x 1.75

* Consult factory for custom frequency, phase noise performance, output level, temperature stability and acceleration sensitivity options.

** See website for additional Standard Part Numbers and Specifications.



Crystal Oscillators

• **RF Modules**

• **Frequency Sources**

• **IMAs**

• **Military**

• **Space**

